

Qualitative Study: Comparison of Implementation of The Effectiveness of the Ethno-Religious-Based SAVI Model in Improving Problem-Solving Skills in PAI Learning

Amiruddin Abdullah^{1✉}, Ari Wijayanti², Wiwid Suryono³, Marita Ika Joesidawati⁴, Ahamd Zain Sarnoto⁵, Siti Fatimah Hiola⁶, Aat Ruchiat Nugraha⁷, Windy Dian Sari⁸, Sukini⁹, Tomi Apra Santosa¹⁰

Universitas Islam Al-Aziziyah, Indonesia⁽¹⁾; Universitas Negeri Yogyakarta, Indonesia⁽²⁾; Politeknik Penerbangan Surabaya, Indonesia⁽³⁾; Universitas Pendidikan Guru Republik Indonesia, Indonesia⁽⁴⁾; Universitas PTIQ Jakarta, Indonesia⁽⁵⁾; Universitas Negeri Makassar, Indonesia⁽⁶⁾; Universitas Padjadjaran, Indonesia⁽⁷⁾; Sekolah Tinggi Agama Islam Fatahillah Serpong, Indonesia⁽⁸⁾; Universitas Widya Dharma Klaten, Indonesia⁽⁹⁾; Akademi Teknik Adikarya, Indonesia⁽¹⁰⁾

DOI: [10.31004/obsesi.v8i5.6192](https://doi.org/10.31004/obsesi.v8i5.6192)

Abstract

This study aims to determine the effectiveness of the Ethno-Religious-based SAVI model on students' problem-solving ability in PAI learning meta-analysis. The eligibility criteria in this study are a) research data obtained from the Google Scholar database, ProQuest, ERIC and Wiley, b) The research must be indexed by the Science Technology Index (SINTA), Scopus and Wos, c) The research topic must be relevant, d) the research is published in the 2020-2023 range, d) the publication must have a score of (r), (t) or F, e) the level of education of the participants, namely elementary, junior high and high school and the sample size of this research > 30 students. Data analysis with the help of JSAP 0.8.5 application. The results of this study are 1) 18 studies analyzed are heterogeneous and normal, 2) there is an influence of ethno-religious-based SAVI model on students' problem-solving ability in PAI learning with a high effect size category ($p < 0.001$; $rRE = 1.12$ and 3) in this study there is no publicity bias. These findings provide information that the ethno-religious-based SAVI model is effective in improving students' problem-solving skills in PAI learning.

Keywords: SAVI Model; ethno-religious; problem-solving skills; Meta-analysis

Copyright (c) 2024 Amiruddin Abdullah, et al.

✉ Corresponding author: Amiruddin Abdullah

Email Address: amiruddin@iaialaziziyah.ac.id (Aceh, Indonesia)

Received 13 August 2024, Accepted 22 Oktober 2024, Published 22 October 2024

Introduction

Problem-solving ability is one of the key skills needed in 21st century education. This skill allows students to face various life challenges with an analytical and solution approach. In the context of education, problem solving is not only related to the mastery of academic material, but also to the development of critical, reflective and creative thinking skills (Nurhuda et al., 2023; Dhitasarifa & Wusqo, 2024). Through problem solving, students are taught to recognise problems, identify causes, and find appropriate and applicable solutions.

This is very important in equipping them with relevant life skills, especially when faced with the complexity of challenges in an increasingly dynamic and diverse modern society (Baran-Bulut & Yüksel, 2023; Eva Latipah, 2021).

In Islamic Religious Education (PAI) learning, problem-solving skills become more significant because PAI not only aims to provide theoretical knowledge about religion, but also to shape students' character and morals based on Islamic values (Kamariah et al., 2023; Sambo & Makgakga, 2024; Wei et al., 2024). Effective PAI learning should be able to guide students to apply religious teachings in their daily lives, including in resolving the social, moral, and spiritual conflicts they face. With good problem-solving skills, students are better able to translate Islamic values into real actions that are ethical, just, and beneficial to their surroundings (Dhitasarifa & Wusqo, 2024). This makes PAI learning more contextual and relevant, helping students not only understand religion conceptually, but also implement it in real-life situations.

Furthermore, religious education has a very important role in shaping students' character, because through religious learning, students are taught not only to understand religious teachings and values, but also to apply them in daily life. Values such as honesty, responsibility, tolerance, and simplicity taught in religion help students to develop a positive attitude and noble character (Rasyidi & Idrus, 2024; Nursyamsiyah & Huda, 2023). Religious education also provides a solid moral foundation for students in facing various challenges and temptations they may face in the social environment. Thus, religious education is not only theoretical, but also functional in forming a good personality and making students into high moral individuals (Nurhuda et al., 2023). In addition, religious education plays a role as a guide in shaping students' ways of thinking and acting in various life situations. A good understanding of religious values gives students the ability to make ethically correct decisions, not only based on rules, but also on the principles of justice and humanity (Satria, 2015). The application of religious values in daily life allows students to lead a balanced life, where they are able to manage social relationships with affection and mutual respect. Religious education, as such, becomes an important instrument for preparing students for complex lives, fostering self-integrity, and making positive contributions to the wider society (Widodo, 2020).

One of the common problems in learning Islamic Religious Education (PAI) is that its approach tends to be theoretical and less interactive. In many cases, PAI learning focuses more on delivering material through lectures and memorisation, where students are only expected to understand religious concepts without being actively involved in the learning process (Rasyidi & Idrus, 2024; Mardiana et al., 2020). This method makes students passive and less motivated to further explore the meaning and relevance of religious teachings in their daily lives. As a result, PAI learning is often uninteresting for students, making it difficult for them to internalise religious values deeply and only learning religion as an academic obligation.

In addition, the theoretical approach in PAI learning also results in the lack of development of critical thinking and problem-solving skills in students. Less interactive learning does not provide space for students to discuss, explore various perspectives, or solve moral and social problems based on religious principles (Sari et al., 2019). In fact, Islamic teachings demand application in various aspects of life, which requires students' ability to analyse situations, evaluate options and make ethical decisions. Students' inability to apply religious values in real-life situations is one of the impacts of learning methods that are less orientated towards developing relevant life skills, including critical thinking, collaboration and problem-solving abilities (Khusna & Heryaningsih, 2018; Srikoon et al., 2024). Therefore, it is necessary to have a model that can develop students' problem-solving skills in PAI learning.

The SAVI (Somatic, Auditory, Visual, Intellectual) approach is a learning model that combines sensory and cognitive experiences to increase students' overall involvement in the learning process (Khusna & Heryaningsih, 2018; Sahara et al., 2018). The somatic component involves physical activity and body movement, auditory uses hearing and conversation, visual

utilises images, videos, or other visual symbols, while intellectual activates thought processes and deep reflection (Widyastuti et al., 2020). By involving multiple senses, the SAVI approach creates a more dynamic and holistic learning experience. This method allows students to actively participate, connects the learning experience with daily activities, and stimulates deeper understanding. Students do not rely solely on memorisation or repetition, but also develop critical and analytical thinking skills through various forms of interaction (Putri et al., 2019).

The SAVI approach is also very effective in improving the effectiveness of education because it is able to adjust to the various learning styles of students. Each individual has a different way of learning, and by combining somatic, auditory, visual and intellectual aspects, SAVI is able to reach more students with diverse needs (Rahayu et al., 2019). In addition, this method also promotes active learning, where students are more emotionally and intellectually involved in the learning process. As a result, students tend to understand the material more easily, remember it longer, and are able to apply the knowledge they gain in various real-life situations. Thus, the SAVI approach can increase the effectiveness of learning, not only in academic contexts but also in the development of important life skills (Putri et al., 2019; Rohana et al., 2019); Birkeland, 2019).

Furthermore, the SAVI learning model can be combined with ethno-religion so that it can develop problem-solving skills in students. The importance of incorporating an ethno-religious approach in learning Islamic Religious Education (PAI) lies in its ability to make religious teachings more relevant and contextual for students. This approach integrates local cultural values with religious teachings, thus creating a stronger link between religion and students' daily life (Ruslan et al., 2024). In Indonesia, with its rich ethnic and cultural diversity, the application of ethno-religion in PAI can help students understand how Islamic values adapt and coexist with local traditions. This not only strengthens students' religious identity, but also enriches their knowledge of how religion can be an integral part of their social and cultural context. Thus, students not only learn about religion as a theory, but also practice religious teachings in the cultural context they are familiar with.

The ethno-religious approach can also help create a more inclusive and meaningful learning atmosphere for students (Iyekepolo, 2020). By using examples and symbols related to local culture, teachers can make PAI materials easier for students to understand and internalise. In addition, this approach encourages students to appreciate diversity, both in terms of culture and religious practices (Kadayifci-Orellana, 2009; Yüçetas & Carol, 2024), thus fostering an attitude of tolerance and respect for differences. When students see that religion is not separate from their culture, they are more likely to live and apply religious teachings in their lives in an authentic and relevant way (Khattab, 2009).

Research conducted by Sutrisno (2020) found that students taught with an ethno-religious approach showed a significant increase in understanding of Islamic teachings compared to students taught using traditional methods. Research by Rahmawati (2021) concluded that students taught using methods that integrate local culture in PAI learning are better able to analyse moral and social problems and provide solutions that are in accordance with Islamic values and local traditions. This finding shows that the ethno-religious approach is not only beneficial in terms of cognitive understanding, but also in the development of critical thinking skills, which is one of the main goals in modern education. Furthermore, research by Nugraha (2022), this local wisdom-based SAVI model proved effective in increasing student engagement in learning Islamic Religious Education (PAI), where students not only learn theoretically but also through activities involving local cultural traditions and Islamic religious teachings. As a result, students are more enthusiastic and show a deeper understanding of the material. The gap in this research is that many studies on the SAVI model have not found an ethno-religious-based SAVI model effect size on students' problem-solving abilities in PAI learning. Based on this, this study aims to the effectiveness of the Ethno-

Religious-based SAVI model on the problem-solving ability of elementary school students in PAI learning by meta-analysis.

Methodology

This research is a type of meta-analysis research. Meta-analysis is used to determine whether the Ethno-Religious-based SAVI model effectively improves students' problem-solving skills in PAI learning. Meta-analysis is a study that involves reviewing the literature that combines and reinterprets the conclusions statistically (Balemen & Özer Keskin, 2018; Tamur et al., 2020; Zulkifli et al., 2022; Hidayah et al., 2023; Zulyusri et al., 2023; Bachtiar et al., 2023).

To get valid data, it is necessary to carry out a selector in accordance with the criteria of eligibility, namely a) research data obtained from Google Scholar, ProQuest, ERIC and Wiley databases, b) research must be indexed by Science Technology Index (SINTA), Scopus and Wos, c) research topics must be relevant and focus on PAI learning, d) research published in the range of 2020-2023, e) publications must have a value of (r), (t) or F, e) the participant's education level is elementary, middle and high school and the sample size of this study is > 30 students.

The data collection process included in the study is in accordance with the inclusion criteria set by the researcher. Data penelitian diperoleh melalui database Google Scholar; ProQuest, Wiley, ERIC dan IEEE). Furthermore, the results of data selection using the PRISMA method can be seen in (Figure 1). From the results of data identification, 114 studies were collected related to the ethno-religious-based SAVI model. In the screening stage, 71 primary studies were excluded because there were duplicates and did not meet the inclusion criteria. Furthermore, 25 studies were excluded because they reported incomplete data. From this selection, 18 studies that met the inclusion criteria were included in the meta-analysis.

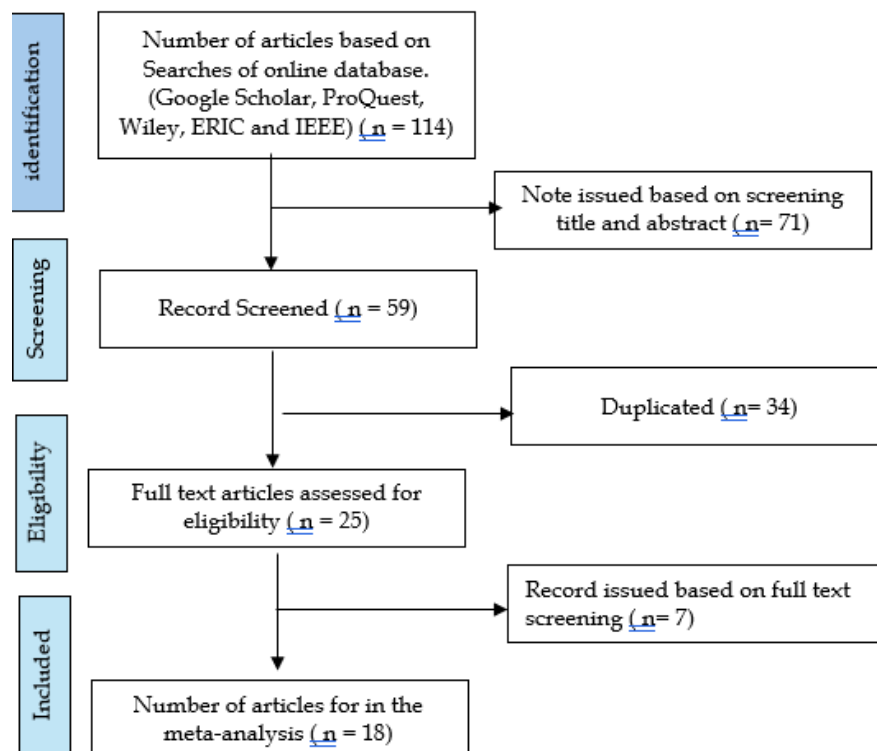


Figure 1. Data Selection Process Through PRISMA

There were 18 studies included as data in this meta-analysis study. Researchers carried out data coding by describing the characteristics of meta-analysis research. The results of data coding can be seen in Table 1.

Tabel 1. The data Coding 18 Studies

Journal Code	Years	N	r	t	F	Sample	Index
SP 1	2022	120		12.084		Elementary School	Scopus
SP 2	2022	100	0.623			Junior School	Scopus
SP 3	2024	80	0.881			Senior School	SINTA
SP 4	2024	65		9.081		Senior School	SINTA
SP 5	2024	200		15.052		Senior School	Scopus
SP 6	2024	140		12.950		Senior School	Scopus
SP 7	2024	66			17.082	Senior School	Scopus
SP 8	2023	50	0.941			Senior School	SINTA
SP 9	2024	78	0.630			Elementary School	SINTA
SP 10	2023	110			16.630	Elementary School	SINTA
SP 11	2023	90	0.619			Elementary School	Scopus
SP 12	2023	48		10.521		Senior School	Scopus
SP 13	2023	90		8.072		Senior School	Scopus
SP 14	2024	150		16.092		Elementary School	SINTA
SP 15	2023	300	0.824			Junior Shool	SINTA
SP 16	2024	70	0.752			Junior Shool	SINTA
SP 17	2024	82	0.491			Junior Shool	Scopus
SP 18	2022	94	0.642			Junior Shool	Scopus

The procedures in this meta-analysis study are a) searching for articles relevant to the research topic, b) selecting according to the inclusion criteria, c) performing the data coding process, d) converting the F value to the r and t values, e) conducting heterogeneity and normality tests, f) calculating the average standard error and summary effect size, g) checking publication bias with funnel plot analysis, Egger Test and Rosenthal fail Safe N Test. Data analysis using JSAP application. 0.8.5. The effect size criteria in the study were guided by (Borenstein et al., 2007; Tamur et al., 2020; Hidayah et al., 2023) which can be seen in Table 2.

Table 2. Effect Size Criteria

Value	Criteria of Effect
< 0 + / -.1	Weak
< -.3	Modest
< -.5	Medium
< -.8	High
≥ -.8	Very High

Result and Discussion

Based on the data search, 114 studies were obtained, but 18 met the predetermined inclusion criteria. The research data obtained t , r and F values. Furthermore, the data is conventional, and the effect size value of each study is calculated. Before calculating the p -value value to test the hypothesis, first test the heterogeneity, which can be seen in Table 3. and 4.

Table 3. The Heterogeneity Test

	Q	df	p
Omnibus test of Model Coefficients	68.914	1	< 0.001
Test of Residual Heterogeneity	184.107	17	< 0.001

Note. p-value are approximate

Table 4. The Residual Heterogeneity Test

	Estimates	Lower	Upper
τ^2	0.471	0.562	1.190
τ	0.518	0.691	0.920
I^2 (%)	97.129	95.008	99.119
H^2	22.076	15.107	42.917

Based on Tables 3 and 4, the results of the heterogeneity test from 18 heterogeneously distributed studies. The P -value < 0.001 and $Q = 184.107$ is greater than the value of 68.914; τ^2 or $\tau > 0$ and I^2 (%) = 97.129 is close to 100%. Furthermore, the summary or mean effect size of the 18 research publications analyzed was determined. The results of the summary effect size can be seen in Table 5.

Table 5. The Result Summary Effect Size Test

	Estimates	Standard Error	z	p	Lower	Upper
Intercept	1.12	0.308	11.092	< 0.001	0.587	1.190

Based on Table 5, the total effect size value is 1,12; $p < 0.001$. These findings show that the inquiry-based learning model based on augmented reality significantly influences students' science literacy skills with a high category of influence. Furthermore, check publication bias through funnel plot, Egger's Test and Roshental Fail-Safe N. The results of the funnel plot analysis can be seen in Figure 1.

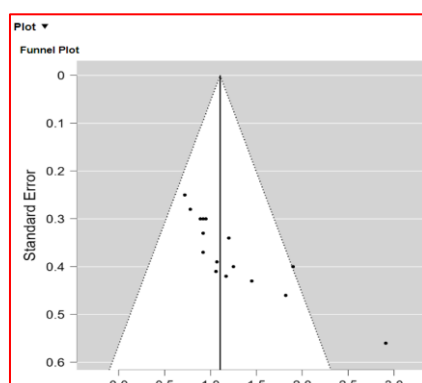


Figure 2. Funnel Plot

Based on Figure 1, the analysis of 18 studies has not been able to determine the symmetrical or asymmetrical curve to identify the existence of publication bias. Because of this, it is necessary to perform Egger's test, which can be seen in Table 6.

Table 6. The Result Egger's Test

	Z	P
Sei	2.062	0.317

Table 6, explains that the p value > 0.05 . This finding shows the distribution of researchers on the plot funnel curve in a symmetrical shape. Symmetrical funnel plots show that they are not usually published in research (Borenstein et al., 2007; Fitriani & Daryono, 2024). The next step is to conduct a Rosenthal Fail Safe N test to increase the validity of the data included in the meta-analysis study. The results of the Rosenthal Fail safe N test can be seen in Table 7.

Tabel 7. Fail Safe N Test

	Fail Safe N	Target Significance	Observed Significance
Rosenthal	1092	0.050	< 0.001

Based on Table 7, the safe fail value of N is $1092 > 5K + 10 = 100$; $p < 0.001$. These findings show that 18 publications included in the meta-analysis data did not find publication bias. These findings explain that the ethno-religious-based SAVI model has a positive influence on students' problem-solving abilities in PAI learning.

Discussion

The ethno-religious SAVI (Somatic, Auditory, Visual, and Intellectual) model in learning Islamic Religious Education (PAI) provides a holistic approach to the development of students' problem-solving skills. This model integrates active learning methods that involve all sensory and cognitive aspects of students and relates them to the cultural context and religious values. (Istiqomah et al., 2020; Satria, 2015) This approach enables students to not only understand religious theories conceptually, but also to internalise and apply them in daily life, especially in dealing with problems related to religious and social values (Khusna & Heryaningsih, 2018). The effectiveness of the ethno-religious SAVI model lies in its ability to bridge theoretical understanding with real practice. In the context of PAI learning, students are often faced with various situations that require critical and analytical thinking skills to solve problems based on religious principles (Rasyidi & Idrus, 2024; Latipah, 2021). Through the use of somatic methods, students are directly involved in physical activities such as drama or simulations that illustrate moral or religious dilemmas. The use of auditory elements through discussions and religious stories helps students understand various perspectives, while visual elements, such as pictures or videos, reinforce their understanding of abstract concepts (Sahara et al., 2018; Widyastuti et al., 2020).

Furthermore, the intellectual approach in the SAVI model encourages students to analyse problem situations logically and systematically. When ethno-religious values are applied, students are invited to consider how cultural norms and local religious teachings influence the way they solve problems (Olasehinde-Williams & Bekun, 2024). This allows them to develop a more mature and integrative mindset, where they not only prioritise technical solutions but also consider the moral and spiritual aspects of decision-making (Birkeland, 2019).

This research also shows that the application of ethno-religious SAVI plays a role in increasing student engagement in the learning process. Students feel more connected to the

material being taught as the ethno-religious elements reflect the values they recognise and value. This motivates them to be more active in learning, thus improving their problem-solving skills (Färe, 2024). By linking religious lessons to their cultural context and social reality, students can more easily relate the lessons to real life. However, the effectiveness of this model also depends on other factors such as the readiness of teachers in applying this method, as well as a learning environment that supports ethno-religious integration in the curriculum (Kadayifci-Orellana, 2009; Adebayo, 2010). Teachers must have a deep understanding of local culture and religious values and be able to develop relevant and interesting learning materials. In addition, schools must also support through the provision of facilities and infrastructure that allow optimal application of SAVI methods, such as the use of varied learning media.

The ethno-religious-based SAVI model offers an innovative approach in improving students' problem-solving skills in PAI learning. By combining active learning and cultural and religious values (Net, 2023), this model not only enriches students' learning experience, but also prepares them to face life's challenges in a wiser way and based on spiritual values. Therefore, this model is very effective to be applied in PAI learning so that students have problem-solving skills in learning.

Conclusion

From the results of this meta-analysis, it can be concluded that 1) 18 studies were analysed with heterogeneous and normal distribution, 2) there is an effect of ethno-religious-based SAVI model on students' problem solving ability in PAI learning with high effect size category ($p < 0.001$; $rRE = 1.12$ and 3) in this study there is no publication bias. These findings provide information that the ethno-religious-based SAVI model effectively improves students' problem-solving skills in PAI learning. By utilising a learning model that involves all sensory and cognitive aspects, students are more motivated to learn, so their critical thinking skills are well developed, especially in situations that require decision-making based on moral and religious principles (Andriani & Ansori, 2024; Ali et al., 2024).

A concrete recommendation for Islamic Religious Education (PAI) teachers in using ethno-religious-based Somatic, Auditory, Visual, and Intellectual (SAVI) models in learning is to integrate local cultural values in accordance with Islamic teachings into each stage of learning. Teachers can utilize relevant local folklore, art, and religious traditions as part of their learning methods, for example, through physical movements in worship practices, listening to exemplary stories from local religious leaders (auditory), using visual media such as images or videos depicting cultural and religious symbols, and facilitating intellectual discussions to connect local culture with Islamic teachings.

Acknowledgement

The researcher would like to thank the lecturers who have collaborated in completing this article so that the research has a positive impact on the world of education.

References

- Adebayo, R. I. (2010). Ethno-Religious Crises and the Challenges of Sustainable Development in Nigeria. *Journal of Sustainable Development in Africa*, 12(4), 213–225. <https://hts.org.za/index.php/hts/article/view/6090/16135>
- Ali, M., Nurhayati, R., Wantu, H. M., Amri, M., & Santosa, T. A. (2024). The Effectiveness of Jigsaw Model Based on Flipped Classroom to Improve Students' Critical Thinking Ability in Islamic Religious Education Learning. *Jurnal Obsesi: Jurnal Pendidikan Anak Usia Dini*, 8(5), 1069–1078. <https://doi.org/10.31004/obsesi.v8i5.6190>

- Andriani, T., & Ansori, A. (2024). Fungsi Manajemen Sumber Daya Manusia di Taman Kanak-Kanak (Study Systematic Literature Review). *Jurnal Obsesi : Jurnal Pendidikan Anak Usia Dini*, 8(5), 1079–1094.
<https://doi.org/10.31004/obsesi.v8i5.6010>
- Balemen, N., & Özer Keskin, M. (2018). The effectiveness of Project-Based Learning on science education: A meta-analysis search. *International Online Journal of Education and Teaching (IOJET)*, 5(4), 849–865.
<http://iojet.org/index.php/IOJET/article/view/452>
- Baran-Bulut, D., & Yüksel, T. (2023). Interdisciplinary Teaching: Solving Real-Life Physics Problems through Mathematical Modelling. *Electronic Journal for Research in Science & Mathematics Education*, 27(4), 118–140.
<https://ejrsme.icrsme.com/article/view/22761>
- Birkeland, J. (2019). How to Implement the Savi Learning Model for Students with Reading Difficulties. *Universal Journal of Educational Research*, 7(9), 44–55.
<https://doi.org/10.13189/ujer.2019.071606>
- Borenstein, M., Hedges, L., & Rothstein, H. (2007). *Introduction to Meta-Analysis*. www.Meta-Analysis.com
- DHITASARIFA, I., & WUSQO, I. U. (2024). the Effect of Steam Approach Digital Teaching Materials on Increasing Creative Problem-Solving Skills. *Turkish Online Journal of Distance Education*, 25(3), 18–27.
<https://doi.org/10.17718/TOJDE.1302079>
- Eva Latipah. (2021). Effective Teaching in Psychological Perspective: PAI Teacher Knowledge and Skills. *Jurnal Pendidikan Agama Islam*, 18(2), 215–226.
<https://doi.org/10.14421/jpai.2021.182-01>
- Färe, R. (1988). *Towards A Dynamic Theory of Production*. 5(4), 117–126.
https://doi.org/10.1007/978-3-642-51722-8_8
- Hidayah, R., Wangid, M. N., Wuryandani, W., & Salimi, M. (2023). The Influence of Teacher Efficacy on Education Quality: A Meta-Analysis. *International Journal of Educational Methodology*, 9(2), 435–450. <https://doi.org/10.12973/ijem.9.2.435>
- Istiqomah, A. N., Kurniawati, I., & Wulandari, A. N. (2020). The implementation of somatic, auditory, visualization, intellectually (SAVI) learning approach to improve students' attention toward mathematics learning. *Journal of Physics: Conference Series*, 1563(1). <https://doi.org/10.1088/1742-6596/1563/1/012033>
- Iyekekpolo, W. O. (2020). Ethno-religious violence in Indonesia: From soil to God. *Politikon*, 47(3), 390–392. <https://doi.org/10.1080/02589346.2020.1798091>
- Kadayifci-Orellana, S. A. (2009). Ethno-religious conflicts: Exploring the role of religion in conflict resolution. *The SAGE Handbook of Conflict Resolution*, 264–284.
<https://doi.org/10.4135/9780857024701.n14>
- Kamariah, Nusantara, T., As'ari, A. R., & Susanto, H. (2023). Exploring Students' Work in Solving Mathematics Problem through Problem-Solving Phases. *Mathematics Teaching-Research Journal*, 15(3), 190–220.
- Khattab, N. (2009). Ethno-religious background as a determinant of educational and

- occupational attainment in Britain. *Sociology*, 43(2), 304–322. <https://doi.org/10.1177/0038038508101167>
- Khusna, H., & Heryaningsih, N. Y. (2018). The influence of mathematics learning using SAVI approach on junior high school students' mathematical modelling ability. *Journal of Physics: Conference Series*, 948(1). <https://doi.org/10.1088/1742-6596/948/1/012009>
- Mackey, J. D., McAllister, C. P., Ellen, B. P., & Carson, J. E. (2021). A Meta-Analysis of Interpersonal and Organizational Workplace Deviance Research. *Journal of Management*, 47(3), 597–622. <https://doi.org/10.1177/0149206319862612>
- Mardiana, D., Utami, A. T., & Ah, S. '. (2020). Pai Method and Strategy Development Innovations: Concepts and Challenges in Facing the Development of Science and Technology. *Journal of Human Capital Development*, 13(1), 15–30.
- Net, W. W. W. P. (2023). Effectiveness of Edutainment Module Based on Local Excellence of Pantai Utara Indonesia Reviewed from Students' Concept Understanding. *Pegem Journal of Education and Instruction*, 13(3), 41–46. <https://doi.org/10.47750/pegegog.13.03.05>
- Nurhuda, A., Ansori, I. H., & Aziz, T. (2023). The Role of Social Media for PAI Teachers in The Student Learning Process at School: an Introduction to Education. *Educative: Jurnal Ilmiah Pendidikan*, 1(3), 127–134. <https://doi.org/10.37985/educative.v1i3.191>
- Nursyamsiyah, S., & Huda, H. (2023). *Scientific Approach Design in PAI Learning in Building Student's Character*. November, 3003–3016. <https://doi.org/10.30868/ei.v12i04.4429>
- Olasehinde-Williams, G., & Bekun, F. V. (2024). Do Fiscal Policy Outcomes Promote Ethno-Religious Stability in African States? *Journal of the Knowledge Economy*, 0123456789. <https://doi.org/10.1007/s13132-023-01686-y>
- Putri, D. M., Leksono, I. P., & Cholid, A. (2019). The Work of SAVI Model, Direct Learning Model and Learning Motivation to Increase Learning Outcome for Elementary Students. *International Journal of Educational Technology and Learning*, 6(2), 29–35. <https://doi.org/10.20448/2003.62.29.35>
- Rahayu, A., Nuryani, P., & Riyadi, A. R. (2019). Penerapan Model Pembelajaran Savi untuk Meningkatkan Aktivitas Belajar Siswa. *Jurnal Pendidikan Guru Sekolah Dasar*, 4(2), 102–111. <https://ejournal.upi.edu/index.php/jpgsd/article/view/20489>
- Rasyidi, A. H., & Idrus, S. A. J. Al. (2024). Exploration of PAI Teacher Challenges and Opportunities; Case Study of Implementation The Independent Learning Curriculum, In East Lombok Elementary Schools. *Jurnal Ilmiah Profesi Pendidikan*, 9(1), 506–514. <https://doi.org/10.29303/jipp.v9i1.2058>
- Rohana, R., Syamsuddin, S., & Azahrah, F. (2019). *Improving Motivation English Learning By Implementation Savi Approach at PGSD Students*. <https://doi.org/10.4108/eai.14-9-2019.2290291>
- Ruslan, I., Amri, F., & Yusriadi, Y. (2024). Religion, Education, and Maintaining Ethno-

- religious Harmony in Sanggau, West Kalimantan. *Dinamika Ilmu*, 24(1), 111–126. <https://doi.org/10.21093/di.v24i1.8763>
- Sahara, R., Mardiyana, & Saputro, D. R. S. (2018). Discovery learning with SAVI approach in geometry learning. *Journal of Physics: Conference Series*, 1013(1). <https://doi.org/10.1088/1742-6596/1013/1/012125>
- Sambo, T. F., & Makgaka, T. P. (2024). Applying Problem Solving Approach in Teaching Addition and Subtraction Word Problems in Diverse Grade 3 Classrooms. *Research in Social Sciences and Technology*, 9(1), 31–46. <https://doi.org/10.46303/ressat.2024.1>
- Sari, I. A. P., Martono, T., & Sawiji, H. (2019). The Development Of Learning Media Website Based Toward Savi Approach In Online Marketing Subjects To Improve Students' Learning Achievement At Vocational High School State In Sukoharjo. *International Journal of Education and Social Science Research*, 2(06), 113–125. http://ijessr.com/uploads2019/ijessr_02_227.pdf
- Satria, E. (2015). Improving Students' Activities and Learning Outcomes In Natural Science In Class V By Using Somatic Auditory Visual Intellectual (SAVI) with Science KIT Seqip in SD Negeri 25 Seroja Lintau. *Prosiding International Conference on Mathematics, Science, Education and Technology (ICOMSET)*, 3, 458–464.
- Srikoon, S., Khamput, C., & Punsrigate, K. (2024). Effects of Stemen Teaching Models on Mathematical Literacy and Mathematical Problem-Solving. *Malaysian Journal of Learning and Instruction*, 21(2), 79–115. <https://doi.org/10.32890/mjli2024.21.2.4>
- Tamur, M., Juandi, D., & Kusumah, Y. S. (2020). The effectiveness of the application of mathematical software in indonesia; a meta-analysis study. *International Journal of Instruction*, 13(4), 867–884. <https://doi.org/10.29333/iji.2020.13453a>
- Wei, Y., Chen, X., Zhong, Y., Liu, G., Wang, M., Pi, F., & Li, C. (2024). Recorded Video Versus Narrated Animation in Teaching Physics Problem-Solving: the Influence of Problem Difficulty Level. *Journal of Baltic Science Education*, 23(3), 570–587. <https://doi.org/10.33225/jbse/24.23.570>
- Widodo, H. (2020). Application of Guided Question and Answer Method To Improve Pai Learning Achievement of State Junior High School 1 Sei Rampah. *Jurnal Tarbiyah*, 27(1), 121–141. <https://doi.org/10.30829/tar.v27i1.687>
- Widyastuti, R., Suherman, Anggoro, B. S., Negara, H. S., Yuliani, M. D., & Utami, T. N. (2020). Understanding Mathematical Concept: The Effect of Savi Learning Model with Probing-Prompting Techniques Viewed from Self-Concept. *Journal of Physics: Conference Series*, 1467(1). <https://doi.org/10.1088/1742-6596/1467/1/012060>
- Youna Chatrine Bachtiar, Mohammad Edy Nurtamam, Tomi Apra Santosa, Unan Yasmaniar Oktawati, & Abdul Rahman. (2023). the Effect of Problem Based Learning Model Based on React Approach on Students' 21St Century Skills: Meta-Analysis. *International Journal of Educational Review, Law And Social Sciences*

(IJERLAS), 3(5), 1576–1589. <https://doi.org/10.54443/ijerlas.v3i5.1047>

Yüçetas, H., & Carol, S. (2024). The influence of education on gender attitudes among ethno-religious majority and minority youth in Germany from a longitudinal perspective. *Humanities and Social Sciences Communications*, 11(1), 1–13. <https://doi.org/10.1057/s41599-024-03222-y>

Zulkifli, Z., Satria, E., Supriyadi, A., & Santosa, T. A. (2022). Meta-analysis: The effectiveness of the integrated STEM technology pedagogical content knowledge learning model on the 21st century skills of high school students in the science department. *Psychology, Evaluation, and Technology in Educational Research*, 5(1), 32–42. <https://doi.org/10.33292/petier.v5i1.144>

Zulyusri, Z., Santosa, T. A., Festiyed, F., Yerimadesi, Y., Yohandri, Y., Razak, A., & Sofianora, A. (2023). Effectiveness of STEM Learning Based on Design Thinking in Improving Critical Thinking Skills in Science Learning: A Meta-Analysis. *Jurnal Penelitian Pendidikan IPA*, 9(6), 112–119. <https://doi.org/10.29303/jppipa.v9i6.3709>